

CRITON VIKING

Thorkom Circular Connectors



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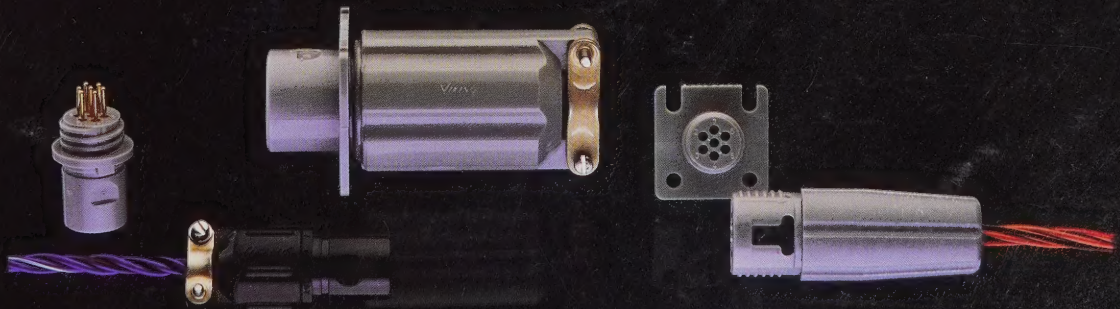


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Viking Connectors Company

Today, as a rapidly growing division of Criton's Electronics and Defense Group, Viking is one of the world's leading manufacturers of connectors and interconnect systems. We are especially proud that our products clearly stand for high quality, reliability, and cost effectiveness. These standards are built into every Viking product and are the cornerstones of our business.

Product and Markets

Viking's extensive line of connectors includes THORKOM Plastic Circular, Printed Circuit Board, D-Subminiature, Telephone and Specialty Connectors. A complete line of relay sockets is also available through Viking. Our products are used in a wide range of applications including data processing, telecommunications, instrumentation, aerospace avionics, and general electronics.

Engineering That's Based on Performance

At Viking, engineering is dedicated to providing the optimum solution to our customers' interconnect requirements.

Viking's Application Engineering staff works with customers, assessing future connector needs and recommending products which satisfy those needs.

Design Engineering combines knowledge, experience and creativity to conceive and develop new products.

Line Maintenance Engineering is devoted to continually improving the effectiveness of existing products and the efficiency of our production systems.

Materials Engineering constantly monitors technological advances in materials and processes to assure that these are incorporated in current designs.

An Assurance of Quality

Always known for highest quality products, Viking's commitment to this vital need is stronger than ever!

Because of a consistent quality history, several major computer and instrument companies operate on a ship-to-stock basis with Viking.

Sales/Customer Service

Viking has a worldwide sales organization ready to serve our customers' needs. District Sales Offices with company Sales Engineers are supported by a network of factory trained representatives.

Franchised distributors, with stocking locations in all major markets, offer off-the-shelf delivery of standard products. Factory customer service assures the prompt handling of all customer inquiries and orders.

THORKOM Connector Series

The THORKOM connector series was developed for use in any commercial and electronic equipment application requiring a low cost, high density connector. THORKOM's unique two-piece design manufactured from high impact thermoplastic provides a high strength-to-weight ratio which ensures optimum durability.

These low cost, light weight connectors offer advantages of noncorrosion, quick connect/disconnect and compactness.

THORKOM connectors are available in several styles including bulkhead receptacles which feature quick and easy retaining ring mounting and a square flange version which can be mounted to the front or rear of the panel. The plug contains a resilient sealing gasket which provides protection from moisture and other contaminants when mated. Dip solder contacts are available for mounting plug or receptacles to printed circuit boards. Dummy fillers can be furnished for connector polarization.

FEATURES

- Available in various shell sizes, high density contact arrangements and mounting styles
- Quick connect and disconnect with either POSI-LOK or V-LOK coupling
- U.L. approved, 94V-2
- "High temperature resistant" thermoplastic for autoclaving processes
- Low unit cost
- Durable and competitively priced screw machined contacts
- Screw machined dip solder contacts
- Various backshell and strain relief options
- Environmental molded cable assemblies



U.L. listed under
U.L. File No. E74125



CSA certified under
File No. LR61763

PERFORMANCE CHARACTERISTICS

- Current Rating on Contacts: 5 Amperes
- Dielectric Withstanding Voltage: 1500 VRMS Maximum @ Sea Level, 600 VRMS @ 70,000 feet (21,336 meters)
- Ambient Temperature: -55° to +125° C. (-67° to +257° F.)
- Insulation Resistance: 5,000 Megohms Minimum
- Contact Retention: 10 lbs. (4.5 kg) axially after one cycle.

APPLICATIONS

- THORKOM connectors have been used in a broad variety of commercial and industrial applications. Some of these include:
- Computer Equipment
- Medical Instrumentation
- Automotive
- Communications
- Marine
- Aviation
- Process Control
- Audio Equipment
- Consumer Electronics
- Agriculture

MATERIALS AND FINISHES

- Connector Housing: High Strength Thermoplastic, U.L. 94V-2 approved or "High Temperature Resistant" thermoplastic material for autoclaving processes*, U.L. 94V-O approved
- Sealed Gasket: Neoprene Rubber
- Screw Machined Contacts: Copper Alloy (stainless steel hood over socket tines), gold plated per MIL-G-45204B Type II, Grade C over nickel (.000010" gold) or tin plated per MIL-T-10727A Type I, bright finish (.000200" min.)
- Cable Clamps: Aluminum, Chemical Conversion Coating
- Panel Mount Retaining Ring: Carbon Steel
- Strain Relief and Cable Clamp Backshells: High Strength Thermoplastic, U.L. 94V-2 approved
- Stove Pipe and Tie Strap Backshells: High Density Polyethylene, U.L. 94V-2 approved
- Contacts No. 22 (accepts 22-24-26 AWG wire)

*Nonstandard material, please contact factory for price and delivery.

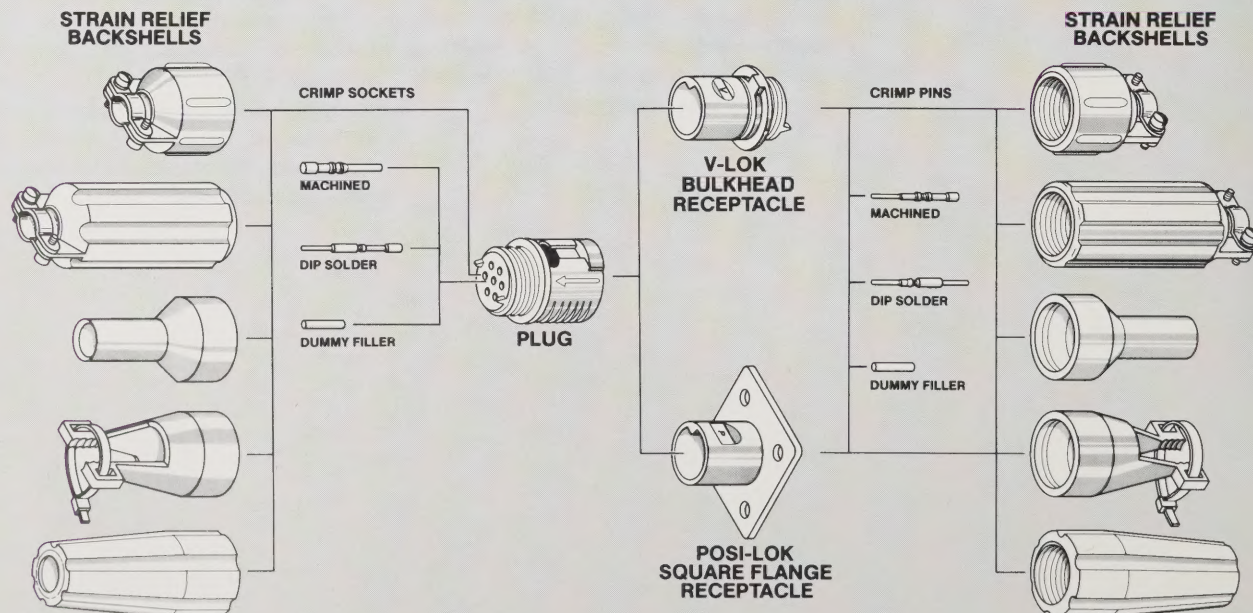
STEPS IN SELECTING THORKOM CONNECTORS

To assist you in selecting and ordering our connectors for your specific application, we have some suggested guidelines to follow:

1. Type of cable to be used (jacketed, shielded, coil, straight, AWG of individual wire)
2. Where connector is used (bulkhead, cable to cable)
3. What are the current requirements (volts, amps, etc.)
4. Size of connector and type (number of contacts, right angle or straight)
5. Strain relief (yes or no, if yes, type of backshell)
6. Type of approval connector needs to meet (U.L., CSA, VDE)

All these questions, when answered, will help expedite the placing of your order and ensure your receiving the correct product.

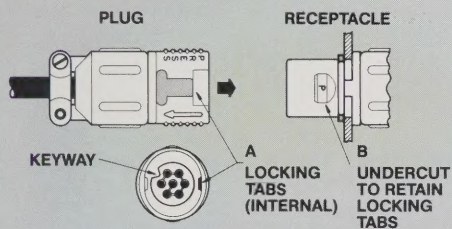
THORKOM CONNECTORS, BACKSHELLS AND CONTACTS



HOW TO MATE AND UNMATE THORKOM

THORKOM connectors can be mated and unmated by means of two locking styles: V-LOK or POSI-LOK.

The plugs used for both locking styles are identical. The receptacles differ in the latch configurations.



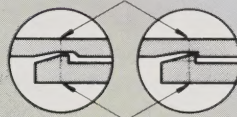
TO MATE PLUGS AND RECEPTACLES:

1. Turn plug so "keyed" insulator faces align.
2. Push plug into receptacle until locking tabs (A) snap into undercuts (B).

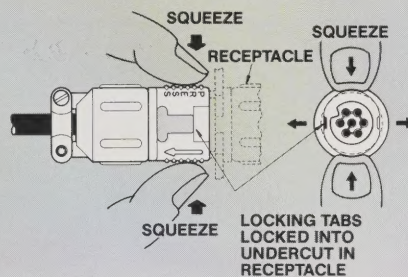
TWO LOCKING STYLES

V-LOK POSI-LOK

RECEPTACLE



PLUG



TO UNMATE PLUGS FROM POSI-LOK RECEPTACLES:

1. Squeeze finger grips to flex plastic coupling area. The locking tabs will deflect outward and unlock.
2. Pull plug from receptacle.

TO UNMATE PLUGS FROM V-LOK RECEPTACLES:

Simply pull plug from receptacle.
Do not turn or twist.
Do not use hand tools.

HOW TO APPLY STRAIN RELIEF BACKSHELL

STEP 1

Insert backshell and strain relief on cable before inserting contacts into insulator.

STEP 2

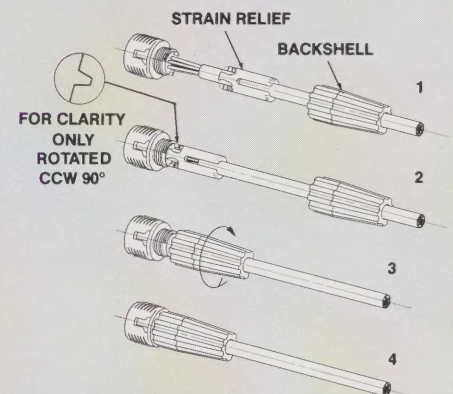
Align stand-offs on insulator with slots on strain relief and mate them together.

STEP 3

Slide backshell over strain relief to meet threads. Do not turn backshell before this, or you may disengage strain relief from correct position. When backshell is against insulator threads push and turn in the same motion as to ensure continual mating of strain relief.

STEP 4

Continue to turn backshell until it bottoms out on insulator. (Hand tight only)



ORDERING INFORMATION

THORKOM connectors can be ordered as complete assemblies (an individual package containing connector, backshell and contacts) by combining component part numbers as shown below. THORKOM con-

nectors can also be ordered as components by using individual component part numbers.

T B R 07 2 * 1 P TP — 100 A U

THORKOM:

- B Bulkhead (7 & 12 only) (pg. 7)
- N Plug and Receptacle new style (7 & 12 only) (pg. 5-6)
- K Bulkhead or Plug (24 pos. only) (pg. 7)
- F Square flange (24 pos. only) (pg. 8)
- R Receptacle (pg. 7-9)
- P Plug (pg. 5-6)

- 07 7 Contact positions
- 12 12 Contact positions
- 24 24 Contact positions

BACKSHELLS: (pg. 10-11)

- 1*0 Cable Backshell
- 1*1 Without Backshell
- 1*2 Stove Pipe Backshell
- 1*3 Tie Strap Backshell
- 1*5 Long Cable Clamp Backshell
- 2*1 Strain Relief, 7 position, Cable Dia. .135 - .170
- 2*2 Strain Relief, 7 position, Cable Dia. .175 - .215
- 2*3 Strain Relief, 7 position, Cable Dia. .220 - .225
- 2*4 Strain Relief, 12 position, Cable Dia. .205 - .245
- 2*5 Strain Relief, 12 position, Cable Dia. .250 - .290
- 2*6 Strain Relief, 12 position, Cable Dia. .295 - .340

CONTACT PLATING:

- Au Gold Plate
- T Tin Plate

TYPE OF CONTACT: (pgs. 6 and 9)

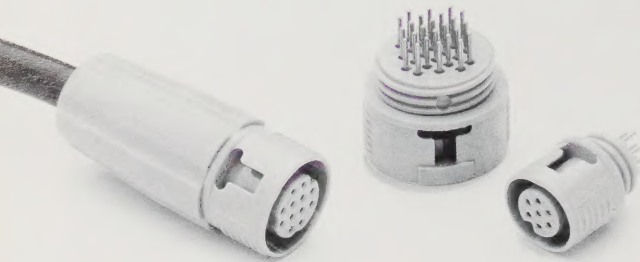
- TS-100 Screw Machined Contact (Loose)
- TP-100 Screw Machined Pin Contact (Loose)
- DS-100 Dip Solder Socket Contact (Loose)
- DP-100 Dip Solder Pin Contact (Loose)
- TD-200 Dummy Filler

LOCKING STYLE:

- (use for receptacle only)
- P - POSI-LOK
- V - V-LOK

- * Color
- 0 - Gray
- 1 - Black

Contacts should be ordered separately from plug and receptacle assemblies. Contact ordering information on pages 6 and 9.



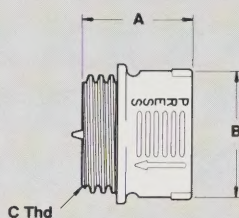
PLUGS

Plugs are available in three shell sizes to accommodate 7, 12 and 24 contact configurations, in either gray or black. Plugs use socket contacts and mate with either POSI-LOK or V-LOK receptacles.

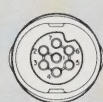
NEW PLUG DESIGN

The new design offers the OEM customer an insulator that accommodates screw machined contacts. The new closed entry protects the contact from any possible stubbing when mating the connectors together.

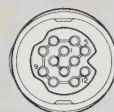
BASIC PLUG ASSEMBLY



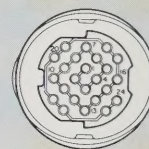
FRONT FACE



7 CONTACTS



12 CONTACTS

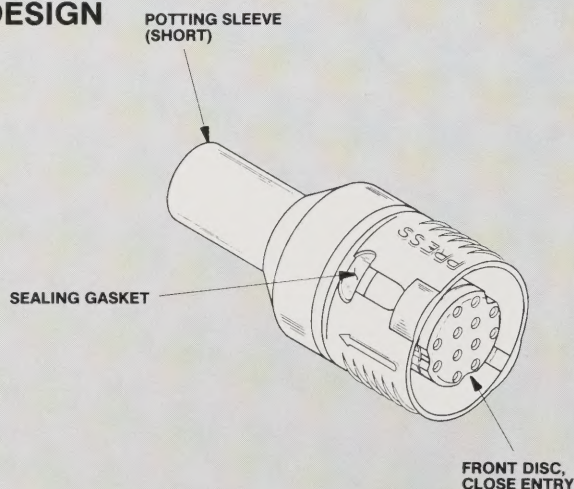


24 CONTACTS

NUMBER OF CONTACTS	PART NUMBER	A	B Dia.	C Thd
7	TNP07-1 1	.63 (16.0)	.51 (12.9)	13/32-16 stub acme
12	TNP12-1 1	.63 (16.0)	.61 (15.5)	1/2-16 stub acme
24	TKP24-1 1	.63 (16.0)	.81 (20.6)	11/16-16 stub acme

All dimensions in inches and (millimeters). Tolerance $\pm .010$ (.25) unless otherwise specified.

NEW PLUG DESIGN



TYPICAL ASSEMBLY

MATERIAL

Insulator - High Strength Thermoplastic, U.L. 94V-2
Sealing Gasket - Neoprene Rubber

REFERENCE INFORMATION

Applicable Specifications - Page 3
Backshell and Accessories - Page 10

MATEABLE CONNECTORS

Receptacles, Bulkhead Mount - Page 7
Receptacles, Square Flange Mount - Page 8
Terminating Method - Page 12

ORDERING INFORMATION

Part numbers on this page do not include contacts. Order socket contacts separately (see page 6). To order plug assemblies separately, use ordering diagram below. See page 4 for ordering plug assemblies and contacts as part of complete assemblies.

NUMBER OF CONTACTS _____
07 7 Contacts
12 12 Contacts
24 24 Contacts TKP (for 24 position only)
*COLOR: _____
0 Gray
1 Black

TNP 07 - 1 * 1

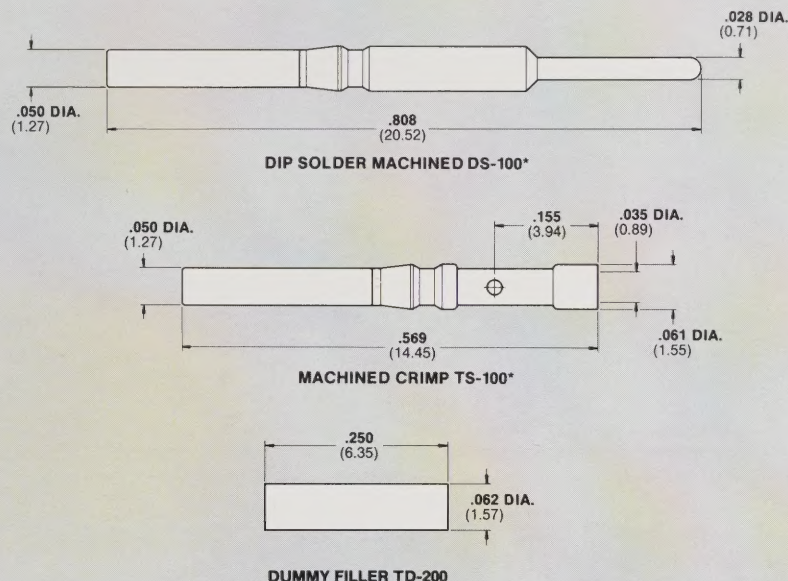
CABLE APPLICATIONS

Shown in this diagram is a typical wire to wire cable assembly application. Plugs mate with flange and bulkhead receptacles. Improved single piece rugged construction allows for easy mating and unmating, with either V-LOK or POSI-LOK locking styles.



SOCKET CONTACTS

Contacts are available in a screw machined style. Socket contacts are to be used with plugs. Contacts accept 22-26 AWG wire and use MIL-T-22520 crimp tool (for screw machined contacts only). To order contacts separately use part numbers below. See page 4 for ordering contacts as part of complete assemblies.



*Add Au for gold plate or T for tin plate

ORDERING INFORMATION

TYPE OF CONTACT: _____
 TS-100* Screw Machined
 DS-100* Dip Solder Socket Contact
 TD-200 Dummy Filler
 AU Gold
 T Tin

TS - 100 AU

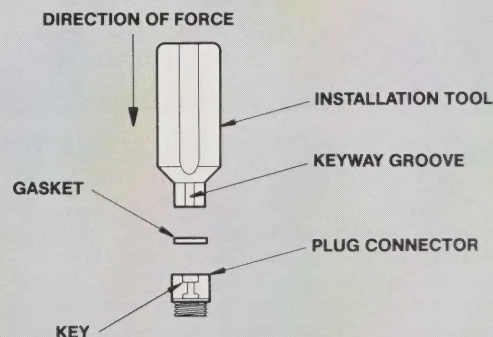
*Add Au for gold plate or T for tin plate

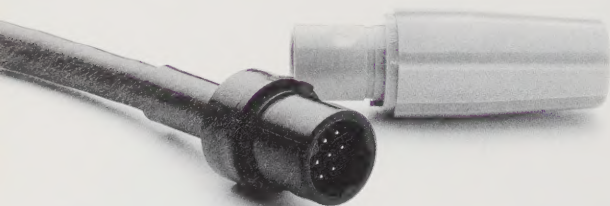
THORKOM PLUG GASKET INSTALLATION INSTRUCTIONS

Tool Numbers: 7 position - 000407-0127
 12 position - 000407-0128

Instructions: To Install Gasket:

- Place gasket between shell and insulator.
- Set installation tool grooves in line with locking keys of shell and push gasket down into the connector.

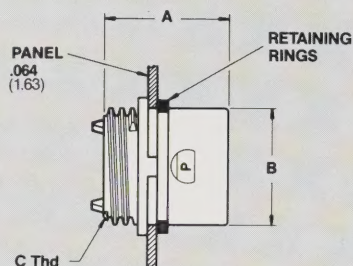




BULKHEAD MOUNTED RECEPTACLES

All receptacles are available in 7, 12 or 24 contacts in gray or black. POSI-LOK and V-LOK styles are offered. This receptacle can be used for cable applications or bulkhead mounted with a retaining ring which is supplied as part of the assembly.

BASIC BULKHEAD RECEPTACLE

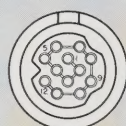


TKR □ - 1 □ 1 - □

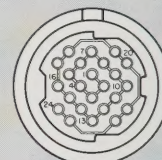


7 CONTACTS

FRONT FACE

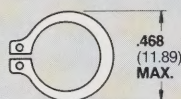


12 CONTACTS

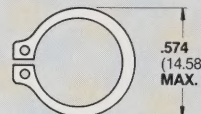


24 CONTACTS

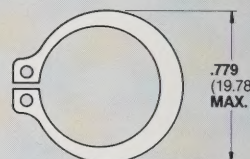
RETAINING RINGS
(INSTALLED DIMENSION)



SIZE 7
990-0014-061



SIZE 12
990-0014-062



SIZE 24
990-0014-063

NUMBER OF CONTACTS	PART NUMBER	A	RECEPTACLE DIMENSIONS B Dia.	C Thd
7	TBR07- 1 □ 1 - □	.74 (18.7)	.41 (10.4)	13/32-16 stub acme
12	TBR12- 1 □ 1 - □	.74 (18.7)	.50 (12.7)	1/2-16 stub acme
24	TKR24- 1 □ 1 - □	.74 (18.7)	.68 (17.4)	11/16-16 stub acme

All dimensions in inches and (millimeters). Tolerance $\pm .010$ (.25) unless otherwise specified.

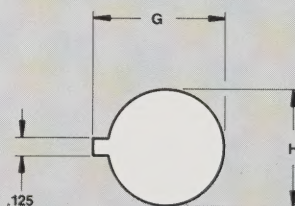
MATERIAL AND FINISH

Insulator - High Strength Thermoplastic,
U.L. 94V-2 approved.
Retaining Ring - Carbon Steel

REFERENCE INFORMATION

Applicable Specifications - Page 3
Backshell and Accessories - Page 10
Mateable Connectors - Page 5
Terminating Tools - Page 12

MOUNTING HOLE SIZES



SUGGESTED
HORIZONTAL
KEY LOCATION

NUMBER OF CONTACTS	G	H Dia.
7	.470 (11.9)	.420 (10.6)
12	.565 (14.3)	.510 (12.9)
24	.760 (19.3)	.700 (17.7)

ORDERING INFORMATION-BULKHEAD RECEPTACLES

Part numbers on this page do not include contacts. Order pin contacts separately (see page 9). To order bulkhead mounted receptacles separately, use ordering diagram at right. See page 4 for ordering bulkhead mounted receptacles and contacts as part of complete assemblies.

CONTACTS: _____
 07 7 Contacts
 12 12 Contacts
 24 24 Contacts (TKR 24 position only)
 *COLOR: _____
 O Gray
 1 Black
 LOCKING STYLE: _____
 P POSI-LOK
 V V-LOK

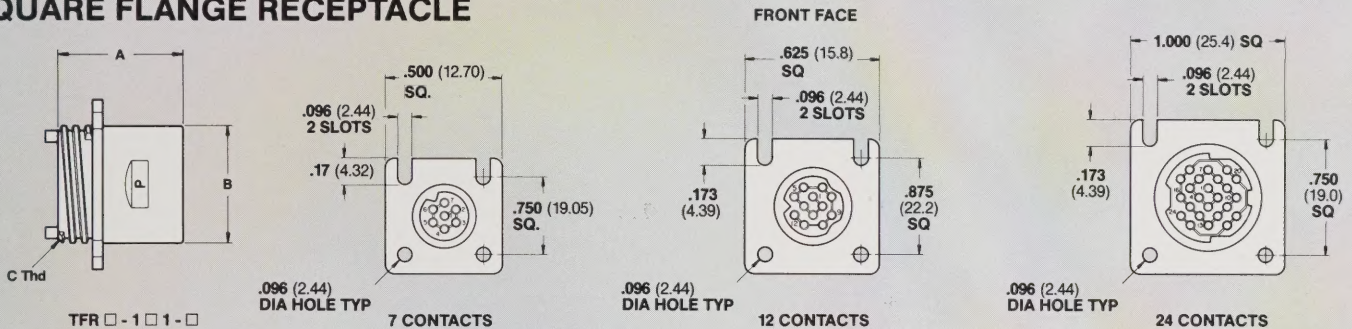
TBR 07 - 1 * 1 - P

SQUARE FLANGE MOUNTED RECEPTACLES

All square flange receptacles are available in 7, 12 or 24 contacts in gray or black. Both POSI-LOK and V-LOK latching styles are offered.



SQUARE FLANGE RECEPTACLE



NUMBER OF CONTACTS	PART NUMBER	A	B Dia.	C Thd
7	TNR07- 1 □ 1 - □	.74 (18.7)	.406 (10.3)	13/32-16 stub acme
12	TNR12- 1 □ 1 - □	.74 (18.7)	.50 (12.7)	1/2-16 stub acme
24	TFR24- 1 □ 1 - □	.74 (18.7)	.687 (17.4)	11/16-16 stub acme

All dimensions in inches and (millimeters). Tolerance $\pm .010$ (.25) unless otherwise specified.

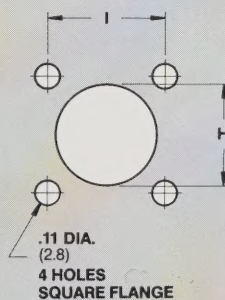
MATERIAL

Insulator - High Strength Thermoplastic, U.L. 94V-2 approved.

REFERENCE

Applicable Specifications - Page 3
Backshell and Accessories - Page 10
Mateable Plugs - Page 5
Terminating Tools - Page 12

MOUNTING HOLE SIZES



NUMBER OF CONTACTS	H Dia.	I
7	.420 (10.6)	.500 (12.7)
12	.510 (12.9)	.625 (15.8)
24	.700 (17.7)	.750 (19.0)

ORDERING INFORMATION-SQUARE FLANGE RECEPTACLES

TNR 07 - 1 * 1 - P

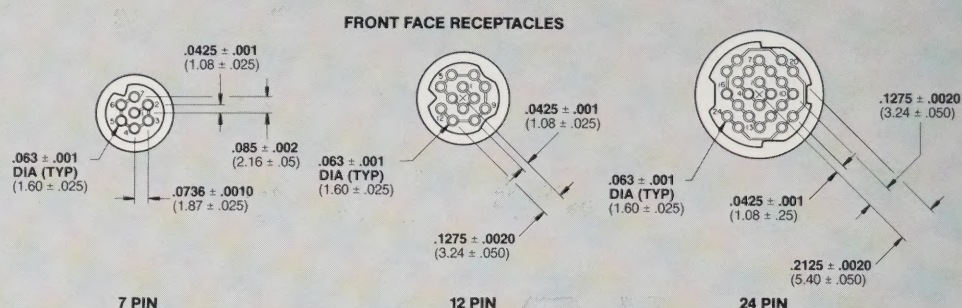
Part numbers on this page do not include contacts. Order pin contacts separately (see page 9). To order square flange receptacles separately, use ordering diagram at right. See page 4 for ordering square flange receptacles and contacts as part of complete assemblies.

CONTACTS: _____
 07 7 Contacts
 12 12 Contacts
 24 24 Contacts (TFR 24 position only)
 *COLOR: _____
 O Gray
 1 Black
 LOCKING STYLE: _____
 P POSI-LOK
 V V-LOK

Receptacles

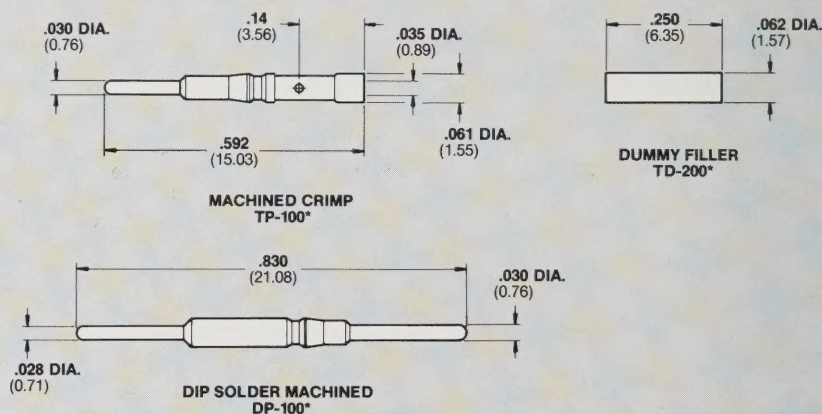
CONTACT PATTERNS

THORKOM subminiature cylindricals offer high contact density within minimum shell sizes. Shown here are contact hole patterns for the three THORKOM shell sizes.



PIN CONTACTS

Pin contacts are available in a screw machined type. Pins are typically used with receptacles. Contacts accept 22-26 AWG wire and use MIL-T-22520 crimp tool (screw machined contact only). To order contacts separately, use part numbers below. See page 4 for ordering contacts as part of complete assemblies.



*Add Au for gold plate or T for tin plate

ORDERING INFORMATION

To order backshells separately, use ordering diagram below. See page 4 for ordering backshells as part of complete assemblies.

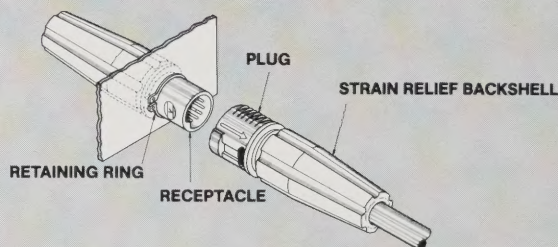
TYPE OF PIN CONTACT: _____
 TP-100* Screw Machine Pin Contact
 DP-100* Dip Solder Pin Contact
 TD-200 Dummy Filler
 AU Gold
 T Tin

TP-100 AU

*Add Au for gold plate or T for tin plate

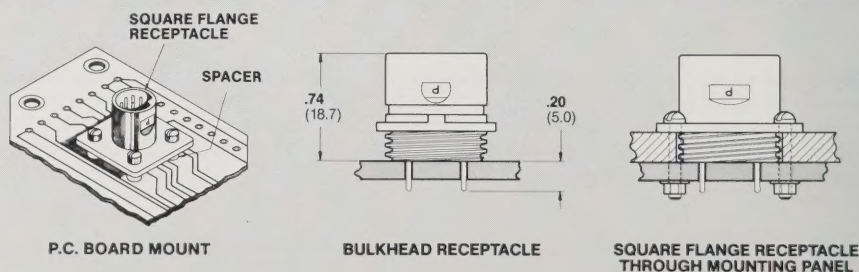
WIRE TO WIRE APPLICATIONS

This diagram illustrates a bulkhead mounted receptacle with attached strain relief backshell.



DIP SOLDER APPLICATIONS

Using dip solder contacts, THORKOM receptacles may be soldered directly into printed circuit boards or flexible circuitry. The dip solder contact is also used as a solder post for pressure or temperature transducer applications.



BACKSHELLS AND ACCESSORIES

The THORKOM series includes an assortment of backshells and accessories that provide environmental protection and strain relief protection. Backshells can be ordered separately or as complete connector/backshell assemblies, as illustrated on page 11.



STANDARD BACKSHELL

Viking standard strain relief/protective backshell assembly is easily installed. See page 4 for installation instructions. These strain relief backshells come in gray or black. The 7 and 12 position connectors each accommodate three different cable diameters.

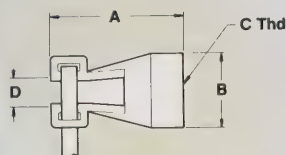


TSR □□ - 2 □□ - 1-6

STRAIN RELIEF BACKSHELL

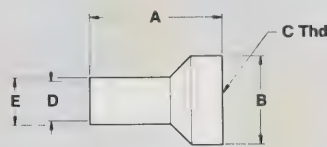
NONSTANDARD BACKSHELLS

Long and short cable clamp, tie-strap and stovepipe backshells can create connector assemblies to be used in a multitude of applications. These backshells will require a factory quotation for price and delivery.



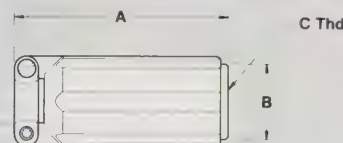
TPW □□ - 1 □ 3

The TPW backshell gives strain relief with a nylon tie strap.



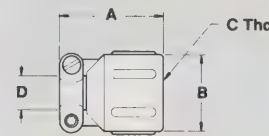
TPS □□ - 1 □ 2

The TPS series can be used as a sleeve for applying potting compound.



THL □□ - 1 □ 5

The THL backshell is a longer version of Viking's TKH series, providing strain relief with aluminum cable clamp hardware.



TKH □□ - 1 □ 0

The TKH option provides strain relief with aluminum cable clamp hardware.

NUMBER OF CONTACTS	PART NUMBER	RANGE OF CABLE DIAMETERS	A ±.010	B Dia. ±.010	STANDARD BACKSHELL DIMENSIONS C Thd ±.005	D ±.005	E Dia. ±.005
7	TSR07-2□1	.150/.185	1.12 (28.0)	.572 (14.5)	13/32-16 stub acme	.180 (4.5)	.515 (12.9)
7	TSR07-2□2	.190/.220	1.12 (28.0)	.572 (14.5)	13/32-16 stub acme	.225 (5.6)	.515 (12.9)
7	TSR07-2□3	.240/.255	1.12 (28.0)	.572 (14.5)	13/32-16 stub acme	.265 (6.6)	.515 (12.9)
12	TSR12-2□4	.230/.260	1.12 (28.0)	.672 (17.1)	1/2-16 stub acme	.250 (6.3)	.610 (15.3)
12	TSR12-2□5	.275/.300	1.12 (28.0)	.672 (17.1)	1/2-16 stub acme	.295 (7.4)	.610 (15.3)
12	TSR12-2□6	.335/.350	1.12 (28.0)	.672 (17.1)	1/2-16 stub acme	.345 (8.6)	.610 (15.3)
NON-STANDARD BACKSHELL DIMENSIONS							
7	TKH07-1□0		.71 (18.0)	.51 (12.9)	13/32-16 stub acme	.23 (5.8)	—
7	TPS07-1□2		.90 (22.8)	.50 (12.7)	13/32-16 stub acme	.18 (4.5)	.25 (6.3)
7	TPW07-1□3		.90 (22.8)	.50 (12.7)	13/32-16 stub acme	.18 (4.5)	—
7	THL07-1□5		1.46 (37.0)	.51 (12.9)	13/32-16 stub acme	.30 (7.6)	—
12	TKH12-1□0		.71 (18.0)	.61 (15.5)	1/2-16 stub acme	.30 (7.6)	—
12	TPS12-1□2		.90 (22.8)	.60 (15.2)	1/2-16 stub acme	.25 (6.3)	.31 (7.8)
12	TPW12-1□3		.90 (22.8)	.60 (15.2)	1/2-16 stub acme	.25 (6.3)	—
12	THL12-1□5		1.48 (37.5)	.61 (15.5)	1/2-16 stub acme	.34 (8.6)	—
24	TKH24-1□0		.71 (18.0)	.81 (20.5)	11/16-16 stub acme	.34 (8.6)	—
24	TPS24-1□2		.90 (22.8)	.80 (20.3)	11/16-16 stub acme	.31 (7.8)	.37 (9.3)
24	TPW24-1□3		.90 (22.8)	.80 (20.3)	11/16-16 stub acme	.31 (7.8)	—
24	THL24-1□5		1.63 (41.4)	.81 (20.5)	11/16-16 stub acme	.50 (12.7)	—

All dimensions in inches and (millimeters). Tolerance ± .010 (.25) unless otherwise specified.

ORDERING INFORMATION

To order backshells separately, use ordering diagram below. See page 4 for ordering backshells as part of complete assemblies.

TYPE OF BACKSHELL:

TKH	1*0	Cable Clamp Backshell
TPS	1*2	Stove Pipe Backshell
TPW	1*3	Tie Strap Backshell
THL	1*5	Long Cable Clamp Backshell
TSR	2*1	Strain Relief 7 Pos. Cable Dia. .135-.170
TSR	2*2	Strain Relief 7 Pos. Cable Dia. .175-.215
TSR	2*3	Strain Relief 7 Pos. Cable Dia. .220-.225
TSR	2*4	Strain Relief 12 Pos. Cable Dia. .205-.245
TSR	2*5	Strain Relief 12 Pos. Cable Dia. .250-.290
TSR	2*6	Strain Relief 12 Pos. Cable Dia. .295-.340

TSR	07	2 * 2
-----	----	-------

*COLOR:

- 0 Gray
- 1 Black

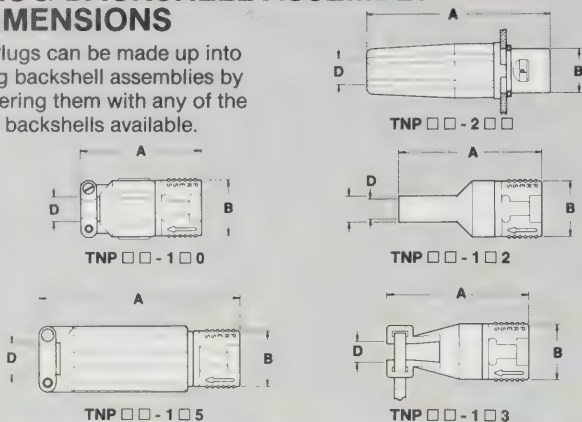
CONTACTS:

- 07 7 Contacts
- 12 12 Contacts
- 24 24 Contacts

Backshell Assemblies

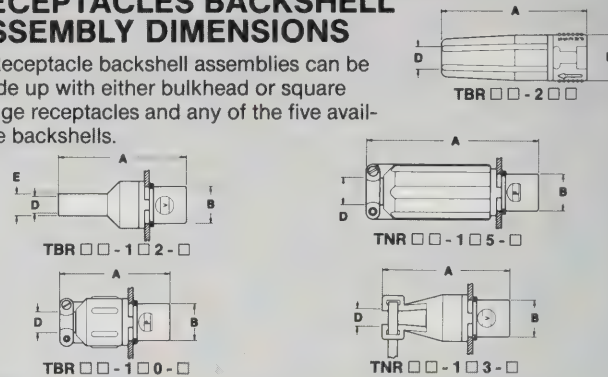
PLUG BACKSHELL ASSEMBLY DIMENSIONS

Plugs can be made up into plug backshell assemblies by ordering them with any of the five backshells available.



BULKHEAD & SQUARE FLANGE RECEPTACLES BACKSHELL ASSEMBLY DIMENSIONS

Receptacle backshell assemblies can be made up with either bulkhead or square flange receptacles and any of the five available backshells.



IMPORTANT: TBR designates bulkhead receptacle and TNR designates square flange receptacle. Dimensions specified.

PLUG BACKSHELL ASSEMBLY DIMENSIONS					
NUMBER OF CONTACTS	PART NUMBER	A	B Dia.	D Dia.	E Dia.
7	TNP07-1 0 0	1.14 (28.9)	.51 (12.9)	.23 (5.8)	—
7	TNP07-1 0 2	1.33 (33.7)	.51 (12.9)	.18 (4.5)	.25 (6.3)
7	TNP07-1 0 3	1.33 (33.7)	.51 (12.9)	.18 (4.5)	—
7	TNP07-1 0 5	1.89 (48.0)	.51 (12.9)	.30 (7.6)	—
7	TNP07-2 0 1	1.55 (38.8)	.51 (12.9)	.265 (6.6)	—
7	TNP07-2 0 2	1.55 (38.8)	.51 (12.9)	.265 (6.6)	—
7	TNP07-2 0 3	1.55 (38.8)	.51 (12.9)	.265 (6.6)	—
12	TNP12-1 0 0	1.14 (28.9)	.61 (15.5)	.30 (7.6)	—
12	TNP12-1 0 2	1.33 (33.7)	.61 (15.5)	.25 (6.3)	.31 (7.8)
12	TNP12-1 0 3	1.33 (33.7)	.61 (15.5)	.25 (6.3)	—
12	TNP12-1 0 5	1.91 (48.5)	.61 (15.5)	.34 (8.6)	—
12	TNP12-2 0 4	1.55 (38.8)	.61 (15.5)	.345 (8.6)	—
12	TNP12-2 0 5	1.55 (38.8)	.61 (15.5)	.345 (8.6)	—
12	TNP12-2 0 6	1.55 (38.8)	.61 (15.5)	.345 (8.6)	—
24	TKP24-1 0 0	1.14 (28.9)	.81 (20.6)	.34 (8.6)	—
24	TKP24-1 0 2	1.33 (33.7)	.81 (20.6)	.31 (7.8)	.37 (9.3)
24	TKP24-1 0 3	1.33 (33.7)	.81 (20.6)	.31 (7.8)	—
24	TKP24-1 0 5	2.06 (52.3)	.81 (20.6)	.50 (12.7)	—

RECEPTACLE AND BACKSHELL ASSEMBLY DIMENSIONS					
NUMBER OF CONTACTS	PART NUMBER	A ±.020 (.51)	B Dia.	D Dia.	E Dia.
7	TBR/TNR07-1 0 0-0	1.25 (31.7)	.41 (10.4)	.23 (5.8)	—
7	TBR/TNR07-1 0 2-0	1.44 (36.5)	.41 (10.4)	.18 (4.5)	.25 (6.3)
7	TBR/TNR07-1 0 3-0	1.44 (36.5)	.41 (10.4)	.18 (4.5)	—
7	TBR/TNR07-1 0 5-0	2.00 (50.8)	.41 (10.4)	.18 (4.5)	—
7	TBR/TNR07-2 0 1-0	1.65 (41.3)	.41 (10.4)	.265 (6.6)	—
7	TBR/TNR07-2 0 2-0	1.65 (41.3)	.41 (10.4)	.265 (6.6)	—
7	TBR/TNR07-2 0 3-0	1.65 (41.3)	.41 (10.4)	.265 (6.6)	—
12	TBR/TNR12-1 0 0-0	1.25 (31.7)	.50 (12.7)	.30 (7.6)	—
12	TBR/TNR12-1 0 2-0	1.44 (36.5)	.50 (12.7)	.25 (6.3)	.31 (7.8)
12	TBR/TNR12-1 0 3-0	1.44 (36.5)	.50 (12.7)	.25 (6.3)	—
12	TBR/TNR12-1 0 5-0	2.02 (51.3)	.50 (12.7)	.34 (8.6)	—
12	TBR/TNR12-2 0 4-0	1.65 (41.3)	.50 (12.7)	.345 (8.6)	—
12	TBR/TNR12-2 0 5-0	1.65 (41.3)	.50 (12.7)	.345 (8.6)	—
12	TBR/TNR12-2 0 6-0	1.65 (41.3)	.50 (12.7)	.345 (8.6)	—
24	TKR/TFR24-1 0 0-0	1.25 (31.7)	.68 (17.4)	.34 (8.6)	—
24	TKR/TFR24-1 0 2-0	1.44 (36.5)	.68 (17.4)	.31 (7.8)	.37 (9.3)
24	TKR/TFR24-1 0 3-0	1.44 (36.5)	.68 (17.4)	.31 (7.8)	—
24	TKR/TFR24-1 0 5-0	2.17 (55.1)	.68 (17.4)	.50 (12.7)	—

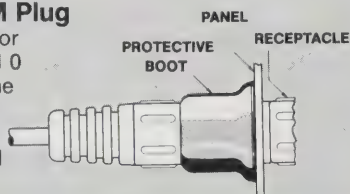
All dimensions in inches and (millimeters). Tolerance ± .010 (.25) unless otherwise specified.

*All five backshell styles available for use with bulkhead receptacle (TBR - 7 & 12 position) (TKR - 24 position) or square flange receptacle (TNR - 7 & 12 position) (TFR - 24 position).

PROTECTIVE BOOTS

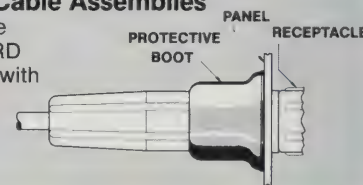
Application with THORKOM Plug

The protective boot is available for use with the 7 or 12 contact TNP-10 series plug/backshell assembly. The boot is transparent and provides a splash proof, moisture seal for the mated plug and bulkhead mounted receptacle.



Application with VIKORD Cable Assemblies

The protective boot may also be used with 7 and 12 contact VIKORD plug/cable assembly when mated with a bulkhead mounted VIKORD receptacle/cable assembly.



PROTECTIVE BOOTS USED WITH:

BOOT PART NUMBER

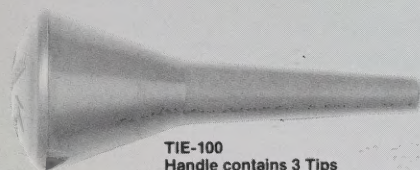
7 contact THORKOM plug backshell assembly TNP07-1*0 or 7 contact VIKORD plug/cable assembly

035-0158-000

12 contact THORKOM plug backshell assembly TNP12-1*0 or 12 contact VIKORD plug/cable assembly

035-0159-000

CONTACT INSERTION/EXTRACTION TOOLS



TIE-100
Handle contains 3 Tips



GREEN (115-0147-000)
Insertion (from rear)
Both Pin & Socket

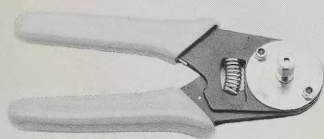


RED (115-0150-000)
Socket Contact Extractor
(from front of plug)



BLUE (115-0392-000)
Pin Contact Extractor
(from front of receptacle)

CRIMP TOOLS



T-422-D CRIMP TOOL
Crimps contact wire sizes 22 & 24 AWG only.



TC-100 CRIMP TOOL
Crimps 22 thru 26 AWG wire sizes.

HAND WIRE STRIPPER



HWS-100
Strips wire gauges 17 thru 28 AWG
to precise length every time.

ASSEMBLY INSTRUCTIONS

A. Crimping

(Use wire gauges 22 thru 26 AWG.)

1. Strip insulation from wire exposing conductor .200" + .015".
2. Insert contact into crimping tool positioner and insert stripped end of wire into contact crimp barrel.
3. Close crimp tool until tool releases—remove contact and wire assembly.

B. Contact Insertion

Step I.

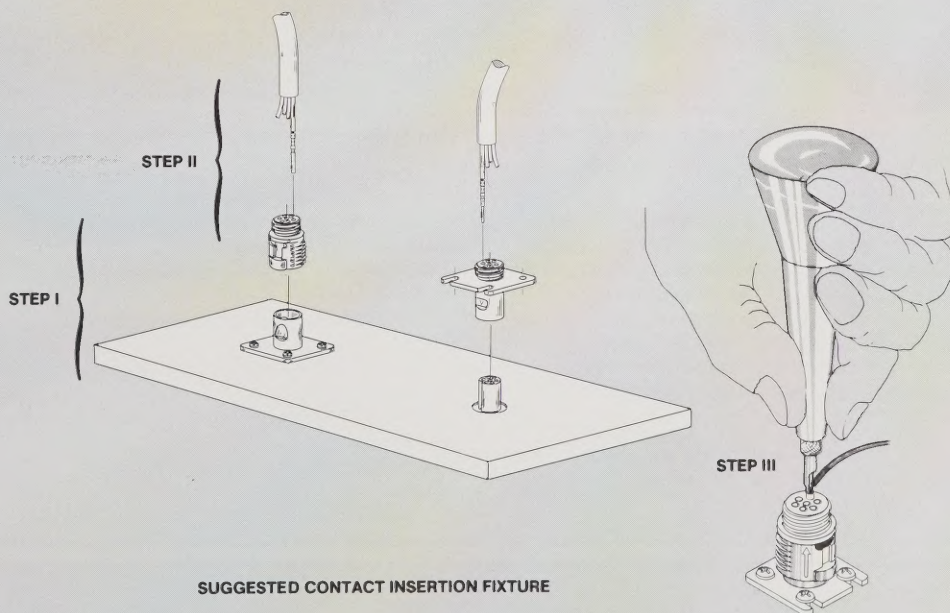
Place insulator for contact insertion onto proper mating connector on fixture.

Step II.

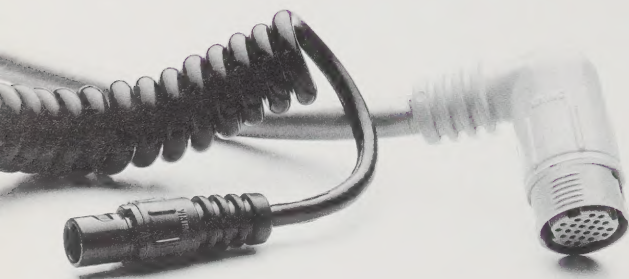
Feed wire bundle thru the back-shell (if one is used). Insert contacts by hand into the back of the insulator.

Step III.

Fit insertion tip between end of wire insulator and end of crimp barrel. Push contact into insulator until contact snaps into locked position. Slide backshell forward and thread it into the insulator.



SUGGESTED CONTACT INSERTION FIXTURE



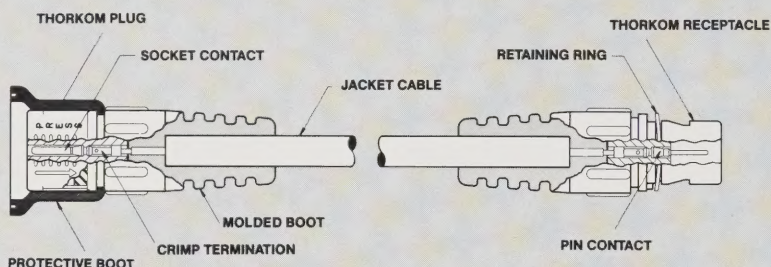
VIKORD MOLDED CABLE ASSEMBLY

Designed for use in commercial and military applications, the VIKORD cable assembly concept grew out of the broad and increasing use of THORKOM connectors and the convenience of providing this connector already terminated as part of a low cost, reliable cable assembly. VIKORD is a completely flame retardant, moisture resistant cable assembly with molded strain relief in straight and right angle types utilizing THORKOM 7, 12 or 24 plugs and inline/bulkhead mount receptacles. Cables are available in straight or retractable styles in any length and choice of wire sizes. Shielding is available.

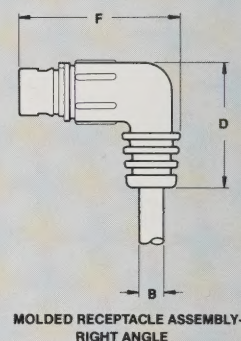
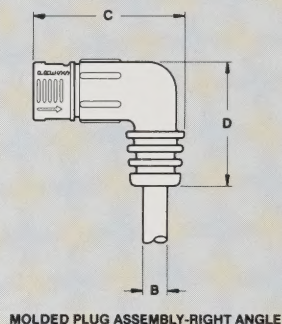
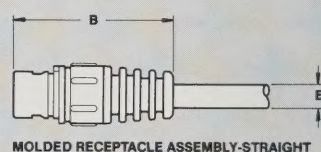
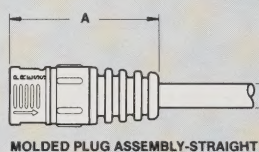
Fourteen standard VIKORD configurations are available to meet your requirements. One part number does it.

VIKORD CONSTRUCTION

VIKORD is a completely molded one-piece connector and cable assembly. Molded strain relief features easy-grip grooves and is semi-resilient to allow for bending without stress to cable.



STRAIGHT AND RIGHT ANGLE CABLE ASSEMBLIES



CONNECTOR SIZE CODE	NUMBER OF CONTACTS	A	CABLE B Dia.		C	VIKORD DIMENSIONAL CHART			
			Jacketed	Shielded		D	E	F	
7	7	1.582 (40.18)	.210 (5.33)	.228 (5.79)	1.55 (39.37)	1.15 (29.21)	1.686 (42.82)	1.654 (42.01)	
2	12	1.582 (40.18)	.260 (6.60)	.286 (7.26)	1.63 (41.40)	1.32 (33.53)	1.686 (42.82)	1.731 (43.97)	
4	24	1.682 (42.72)	.370 (9.40)	.395 (10.03)	1.84 (46.73)	1.59 (40.39)	1.786 (45.36)	1.944 (49.37)	

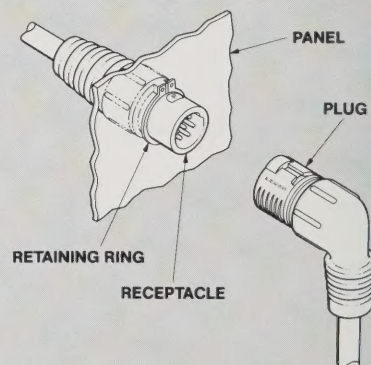
All dimensions in inches and (millimeters). Tolerance $\pm .010$ (.25) unless otherwise specified.

TYPICAL APPLICATION

The drawing shows a typical application of two VIKORD cable assemblies: A straight inline receptacle, mounted in a bulkhead with retaining ring and a mating plug/cable assembly. VIKORD assemblies are also used as inline cable connections or as a cable assembly to a customer-wired THORKOM plug or receptacle. See page 14 for Standard VIKORD Configurations.

VIKORD cable assemblies are presently in use in the following applications:

MEDICAL—diagnostic, patient monitoring and therapeutic equipment.
 AUTOMOTIVE—ignition, fuel control, engine analysis.
 RECREATIONAL—metal detectors, depth finders, fish locators.
 ALARM SYSTEMS—security, fire and smoke detection systems.
 COMMUNICATIONS—intercom and data terminals.
 ORDNANCE—arming and programming devices.
 DATA PROCESSING—peripheral devices.

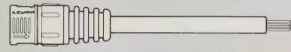


Code	CABLE TYPE AND CONDUCTOR SIZE DESCRIPTION			
	Connector Size #7	Connector Size #12	Connector Size #24	
A	P.V.C. jacketed cable with 7 No. 22 AWG conductors.	P.V.C. jacketed cable with 12 No. 22 AWG conductors.	P.V.C. jacketed cable with 25 No. 22 AWG conductors.	
B	P.V.C. jacketed cable with 7 No. 24 AWG conductors.	P.V.C. jacketed cable with 12 No. 24 AWG conductors.	P.V.C. jacketed cable with 25 No. 24 AWG conductors.	
C	P.V.C. jacketed cable with 7 No. 26 AWG conductors.	P.V.C. jacketed cable with 12 No. 26 AWG conductors.	P.V.C. jacketed cable with 25 No. 26 AWG conductors.	

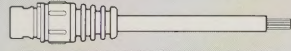
Note: Polyurethane jacketed cable is available on special order with No. 22, 24 and 26 AWG conductors. Consult factory for details.

STANDARD CONFIGURATIONS

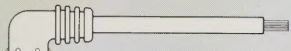
Standard VIKORD configurations are shown below. Each assembly has a code letter used in the part number to designate the configuration desired. A color coded wiring diagram listing each wire color/contact location accompanies each shipment. Contact factory for special configurations, not shown.



STRAIGHT PLUG TO BUTT END
CODE A



STRAIGHT RECEPTACLE TO BUTT END
CODE B



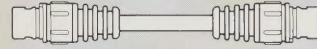
RIGHT ANGLE PLUG TO BUTT END
CODE C



RIGHT ANGLE RECEPTACLE
TO BUTT END
CODE D



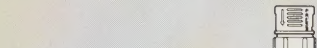
STRAIGHT PLUG TO STRAIGHT PLUG
CODE E



STRAIGHT RECEPTACLE TO STRAIGHT RECEPTACLE
CODE F



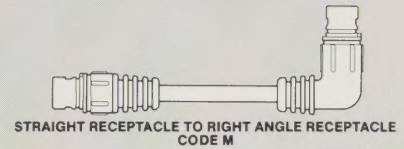
STRAIGHT PLUG TO STRAIGHT RECEPTACLE
CODE G



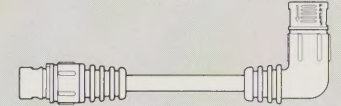
STRAIGHT PLUG TO RIGHT ANGLE PLUG
CODE H



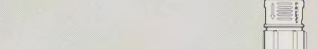
STRAIGHT PLUG TO RIGHT ANGLE RECEPTACLE
CODE K



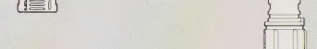
STRAIGHT RECEPTACLE TO RIGHT ANGLE RECEPTACLE
CODE M



STRAIGHT RECEPTACLE TO RIGHT ANGLE PLUG
CODE N



RIGHT ANGLE PLUG
TO RIGHT ANGLE PLUG
CODE P



RIGHT ANGLE PLUG
TO RIGHT ANGLE RECEPTACLE
CODE R



RIGHT ANGLE RECEPTACLE
TO RIGHT ANGLE RECEPTACLE
CODE S

CABLE LENGTH TOLERANCE TABLE

A UNC

B Metric

CABLE LENGTH (in feet)	TOLERANCE (in inches)	CABLE LENGTH (in meters)	TOLERANCE (in centimeters)
0000 thru 0200	+1 -0	0000 thru 0100	+ 3.0 - 0.0
0201 thru 0500	+2 -0	0101 thru 0200	+ 6.0 - 0.0
0501 thru 1200	+3 -0	0201 thru 0400	+ 9.0 - 0.0
1201 thru 2000	+5 -0	0401 thru 0600	+15.0 - 0.0
2001 thru 9999	+6 -0	0601 thru 9999	+18.0 - 0.0

CABLE SPECIFICATIONS

Cable Jacket	P.V.C.	Polyurethane
Wire Insulation	P.V.C.	Polyolefin
Temperature Rating	80°C	105°C
(10°C rise)		
Voltage Rating	200 V.A.C.	600 V.A.C.
Current Ratings per Conductor (26 AWG)		
7 Conductor	1.32 AMP	2.40 AMP
12 Conductor	1.16 AMP	2.10 AMP
24 Conductor	0.83 AMP	1.50 AMP
Insulator Resistance	50 Megaohm	100 Megaohm

Note: Cable lengths for retractable cable to be expressed as fully extended. The retracted length will be 1/4 of the extended length.

ORDERING INFORMATION

VIKORD ASSEMBLY: _____

All assemblies will be gray (connectors, molding and cable) unless otherwise specified by modification at the end of part number.

CONNECTOR SIZE: _____

7: 7 Contact(s)

2: 12 Contact(s)

4: 24 Contact(s)

CONFIGURATION CODE LETTER: _____

(See Standard Configuration above)

LOCKING TYPE: _____

P: POSI-LOK

V: V-LOK

Cable assemblies with two receptacles will have the same locking type on each unless otherwise specified.

When the cable assembly has two plugs or a plug and a butt end the designator should be "0".

CABLE STYLE: _____

1: Straight Cable

2: Retractable Cable Coiled (Consult factory before ordering)

CABLE TYPE AND CONDUCTOR SIZE CODE: _____

A, B or C (See table at left)

(Consult factory for nonstandard cables)

CABLE LENGTH: _____

Feet (or Meters)

V 2 R P I C 10 06 A 2 A

MODIFICATIONS: (More than one modification can be ordered)

A: Color black (connectors, molding and cable). Both ends.

B: Standard stripping one end. Applies to Configuration Code: A, B, C and D.

C: Machined Contacts: Pin and socket.

D: Color black (connectors and molding). Color gray (cable). Both ends.

E: Protective boot supplied.

OUTER CABLE COVER:

1: Jacket, unshielded

2: Jacket, shielded

3: Jacket, shielded with shield grounded to contact

MEASUREMENT SYSTEM:

A: UNC (Feet/Inches)

B: Metric (Meters/Centimeters)

INCHES (OR CENTIMETERS):

(See table above for tolerances)

When cable assemblies exceed 100 feet, use metric measurements.

U.S. SALES OFFICES

NORTHWEST

562 Valley Way
Milpitas, CA 95035
(408) 942-4830
FAX: 408-945-1173

SOUTHWEST

21001 Nordhoff Street
P.O. Box 2379
Chatsworth, CA 91311
(818) 341-4330
TWX: 910-494-2094
FAX: 818-882-5713

NORTH CENTRAL

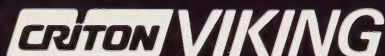
12228 James Road
Minnetonka, MN 55343
(612) 933-2211
FAX: 612-933-3143

NORTHEAST

591 North Avenue
Door 2
Wakefield, MA 01880
(617) 245-4110
FAX: 617-245-7521

SOUTHEAST

1296 Arlene Court
Lilburn, GA 30247
(404) 923-3308
FAX: 404-923-3154



Criton Technologies
Electronics and
Defense Group

Viking Connectors Co.
21001 Nordhoff Street
P.O. Box 2379
Chatsworth, CA 91311
(818) 341-4330
TWX: 910-494-2094
FAX: (818) 882-5713

Viking Connectors (UK) Ltd.
Chatsworth House
Portland Close, Houghton Regis
Dunstable, Bedfordshire LU5 4AW, England
Phone: Dunstable (0582) 603600
Telex: 825377
FAX: (0582) 471114